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Collaborative planning and management of the San Andres Archipelago's coastal and marine resources: A short communication on the evolution of the Seaflower marine protected area

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Abstract

The Archipelago of San Andres, Old Providence, and Santa Catalina, Colombia, in the Western Caribbean—a UNESCO Biosphere Reserve since November 2000—relies heavily on its coastal and marine resources, which are important for fisheries, tourism, as habitats, and for their traditional cultural value. However, as economic and subsistence importance has increased so have incidences of conflict over resource use and threats to ecosystem health. One of the main conflicts relates to traditional resource use as practiced by native islanders alongside new types of uses, methods, and exploitation, particularly with regards to industrial fishing. This conflict is exacerbated by historically centralized marine management processes linked primarily to economic development, which have excluded native islanders from planning and decision-making, failed to recognize their fishing rights, and lacked respect for the inherent sociocultural importance of traditional knowledge. In acknowledgment of the need to involve stakeholders in resource management planning, the local representative of Colombia's National Environment System (SINA), CORALINA, has embraced an alternative approach to historical top-down schemes. The approach is characterized by: (1) recovering traditional best management practices in coastal and marine management and integrating

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them with appropriate new methods; (2) involving stakeholders, especially native islanders, as equal partners in planning and implementation processes; (3) building local, national, and international coalitions and partnerships; (4) strengthening the capacity of local institutions; and (5) creating new capacity through formal and informal educational initiatives. At the heart of this approach is participation and equity for all, as exemplified in the planning process for the archipelago's Seaflower Marine Protected Area (MPA).

1. Introduction

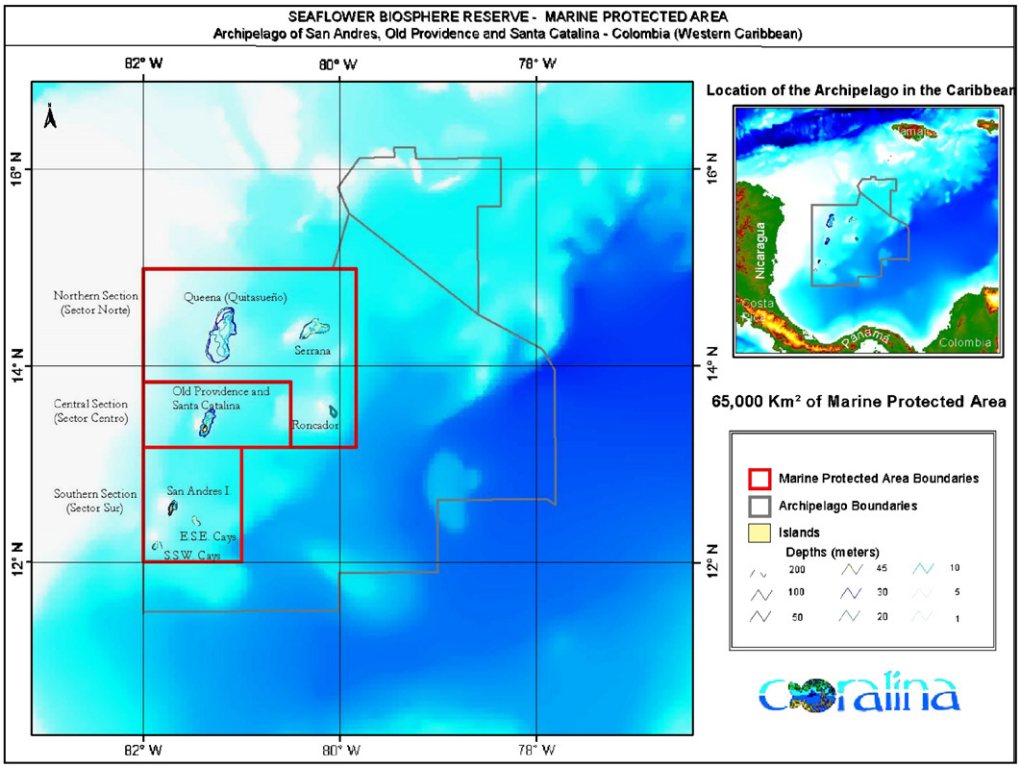
The location, socio-economics, and administrative and political background of the San Andres Archipelago are presented in Baine et al. [1], in this special issue. This paper explores the evolution of collaborative planning and management of the archipelago's coastal and marine resources that resulted in the establishment of the Seaflower Marine Protected Area (MPA).

Traditionally a nation of centralized government and rule, Colombia's new Constitution of 1991 provides the impetus for locally enacted environmental management in accord with national and international policies. The Constitution calls for a framework of environmental responsibility through principles of civil rights and participatory management. It paved the way for the congressional law 99 (passed in 1993) that established the National Environment System (SINA). The cornerstone of SINA is the Ministry of the Environment and the 34 regional autonomous corporations (CARs) that are responsible for managing the environment and natural resources in their respective jurisdictions.

Articles in the 1991 Constitution identify the obligation of the state and its citizens to protect the cultural and natural assets of the nation, including the multi-cultural and multi-ethnic character of its people (art. 7, 8). The state is also obligated to protect the diversity and integrity of the environment, to conserve areas of special ecological importance, to foster appropriate education to achieve these goals, and to recognize the right of the people to participate in decisions that will affect them (art. 79). Planning for sustainable development, conservation, and habitat restoration or replacement is mandated (art. 80). The Constitution also gives the San Andres Archipelago special protections. It allows for the establishment of controls on population density and national immigration, and of special regulations to protect the environment, natural resources, and native cultural identity (art. 310).

As previously highlighted [1], CORALINA is the CAR for the San Andres Archipelago. Because of both the region's distinctiveness within the country and also the significance and fragility of its ecosystems, CORALINA is one of seven CARs with a broad sustainable development mandate and is the only one with jurisdiction in the marine area. As defined in law 99, CORALINA's functions relate to:

- determining and specifying conservation and sustainable resource use;
- directing environmental, land and marine-use planning, and zoning;
- enforcing environmental norms;
- involving the native community in sustainable resource management;
- promoting equitable distribution of benefits from the environment and natural resources;



Map 1. San Andres Archipelago and Seaflower MPA boundaries with location (2006). *Source*: A. Mitchell, 2006.

- enacting regulations to protect regional flora and fauna; and
- developing projects of research, environmental protection, recovery, and sustainable use in conjunction with the state, NGOs and the private sector.

CORALINA led the planning processes to designate the Seaflower Biosphere Reserve, declared by UNESCO in 2000, and the Seaflower MPA, declared by the Minister of Environment, Housing, and Territorial Development in 2005. CORALINA also manages and administrates these protected areas. The external boundaries of the San Andres Archipelago, with its location, and the Seaflower MPA are shown in Map 1. The archipelago's terrestrial areas, which are surrounded by the MPA, are also part of the biosphere reserve.

2. Management planning

During the course of the European Union-funded project examining appropriate marine resource management and conflict resolution techniques for the archipelago (1998–2002), CORALINA engaged local stakeholders in a participatory process aimed at identifying and meeting management challenges faced by the archipelago's inhabitants [1]. A stakeholder consultation structure was set up to work on coastal and marine resource issues.

The first step was to make inventories of users. These included fishers, water-sport businesses, marinas, water taxis, tourism associations, government offices, environmental NGOs, and native rights groups. The final list totaled 81 organizations and institutions. User groups in San Andres Island (SAI) are ethnically divided: artisanal fishers are natives, while non-natives (migrants from mainland Colombia who mainly arrived after 1960 and their descendants) run tourism and watersports enterprises. In Old Providence and Santa Catalina (OPSC), natives control all stakeholder groups. Industrial fishing is based off-island, involving few locals at the time of the project. This situation appears to have changed slightly since 2003, so CORALINA is presently gathering information to update levels of local involvement in industrial fishing, including ownership of vessels and crew numbers.

After completing the inventory, a meeting was held with the groups. Because of the ethnic tension between stakeholders in SAI, this meeting was acrimonious. The level of distrust between natives and resident continentals made productive exchange impossible. Some of the hostility stemmed from different languages and social customs, making it even harder for these groups to communicate. Re-evaluating the approach, common interest groups were envisioned in which stakeholders would meet in their own languages, in places of their choosing, and in accordance with their customs [2].

Six marine and coastal resource user groups were identified: (1) artisanal fishers including cooperatives, (2) recreational users including the tourist industry, (3) native rights organizations (representing traditional users), (4) conservation interests, (5) educational institutions with marine resource programs, and (6) government agencies with relevant jurisdictions. Members of the last group were determined to be the Departmental Fishing Board, the National Institute of Fishing and Aquaculture (INPA), the Maritime and Port Authority (DIMAR) at local and national levels, the National Marine Research Institute (INVEMAR), Old Providence McBean Lagoon National Park Office, Municipal Offices of Planning and Tourism (in OPSC) and the Departmental Secretaries of Fisheries, Tourism, and Planning (in SAI). Organizations were then classified according to interest, and working groups were set up. The structure is summarized in Table 1 while the participation goals, as developed with stakeholders, are summarized in Table 2.

Table 1
Stakeholder participation structure

	Community Forum
San Andres	Artisanal Fishers Working Group Water Sports and Tourism Working Group Conservation Working Group Traditional Users Working Group Education Working Group Institutional members (not affiliated with a working group)
Old Providence and Santa Catalina	Artisanal Fishers Working Group Water Sports and Tourism Working Group Conservation, traditional use members (not affiliated with a working group) Institutional members (not affiliated with a working group)

Table 2
Guidelines for stakeholder participation in the project

	Community participation: guidelines
Objective	Work in cooperation with all the users of marine and coastal resources (stakeholders) to develop programs that promote sustainable resource use for the benefit of all involved, without jeopardizing conservation priorities, ecosystems, or biodiversity
Goals	Active community involvement and participation Improved information and research base on marine and coastal resources Increased local knowledge about marine and coastal resources, their socioeconomic importance, threats, and user pressure Reduction of conflicts between marine and coastal resource user groups (stakeholders) Cooperative policies and programs for conservation and sustainable use of marine and coastal resources Improved quality of life in the archipelago
Membership	Representatives of marine and coastal resource user groups (stakeholders) including fishers, the tourist sector, water sports, environmental interests, traditional users, educators, and government entities
Members' functions	Represent his/her stakeholder group Work towards the cooperation of his/her stakeholder group with other stakeholder groups Act as the contact between CORALINA and his/her stakeholder group Discuss and evaluate progress and report to his/her stakeholder group Help gather information about the uses and needs of his/her stakeholder group Identify shared and conflicting activities and needs of tourism, fisheries, and conservation Examine activities that threaten conservation and sustainable use and that create conflicts between stakeholders Strive to resolve conflicts between stakeholders and to promote the overall social and economic welfare of the local society Work in accord with regional, national, and international policies and guidelines for environmental protection, sustainable use, and equitable benefit distribution

To reach the general public, an outreach program was developed that targeted organizations not represented in the working groups. Another inventory was made of neighborhood associations, churches, sectoral boards, and cooperatives. Community promoters visited the organization's leaders to arrange for CORALINA to meet with the group. The organization itself defined the terms—selecting time, place, language, and format. Giving the community control over meetings put government agencies and the people on a more equal footing, which greatly increased participation [2]. The outreach program also targeted schools.

3. Identification of issues and threats

During outreach and working group meetings, a great deal of information on coastal and marine resource issues and threats to ecosystem health and productivity was collected. The open-access regime and lack of coastal and marine resource management had led to minor conflicts. These included site and resource competition between artisanal fishers and divers, conservation interests and users, in general, motorized and non-motorized water sports businesses, bathers and water sports, and divers and other water sports. Some

conflicts over the use of illegal gears and fishing practices existed between groups of artisanal fishers. However, several more serious issues were mentioned consistently by stakeholders; all of them set against a background of perceived marginalization of the native community, cultural diversity, and strained relations between the archipelago's inhabitants and the national government [1].

3.1. Industrial fishing

The strongest conflict centered around industrial fishing, which takes place primarily in the northern cays region. Historically, industrial fishing licenses have been issued on the mainland to companies that have no local base, employ no islanders, and generally land no product in the archipelago. Annual quotas and fisheries management policies have also been established off-island without adequate studies or civic participation. Local stakeholders still say these quotas are inequitable; for example, the INPA-established quota for conch in 1999 was 200 tons with 3 allotted to artisanal fishers and in 2004 it was 96 tons with only 9 allotted to artisanal fishers. Native islanders request autonomy in the distribution of fishing quotas and equal access to fishing grounds. Government argues that native fishers do not have the technical capacity to fish a higher quota, even if authorized. Artisanal fishers, however, counter that any portion of quota they do not fish will help reduce over-fishing, serving conservation values.

Other major issues that have resulted from inequitable fisheries management are the increasing difficulty of access to collective fishing grounds by artisanal fishers, failure to respect or acknowledge traditional fishing rights, and sea tenure, demands for local autonomy in licensing, and management, lack of benefit to the island community, severe over-fishing including exploitation of threatened, and endangered species, and neglecting to enforce existing fisheries regulations that include gear restrictions and closed seasons. Related problems mentioned were a decline in local income generated from fishing, food-fish shortages, and rising seafood prices. In consultations with the diving industry on the islands, the belief that over-fishing by off-island industrial vessels was also reducing the marine biodiversity that attracts sport divers was stressed.

3.2. Lack of environmental management

Over-fishing and catching juveniles and species while spawning were major threats, as was the use of illegal gear like long lines, scuba, seines, and other nets. Stakeholders also singled out siltation from poor land—use practices including deforestation and urbanization, sand mining, and pollution from sewage outfalls, leachate, direct dumping, and improper disposal of oils and solid waste. Physical damage has resulted from anchors, propellers, groundings, contact, and souvenir collection. Poverty and social problems like drug addiction have led to unsustainable gathering of renewable and non-renewable resources and a growing lack of food security [2].

3.3. Population pressure

The steady influx of migrants from the Colombian mainland since 1960 has led to extreme competition for scarce resources, particularly in SAI. From 1950 to 1990, the archipelago's population doubled four times, growing from 5675 in 1950 to 23,000 in 1973.

According to Colombia's National Department of Statistics (DANE), by 1985 the population was 36,000; in 1993 it was 61,000 and 10 years later it was nearly 78,000. Virtually all the immigrants were from other departments of Colombia [3]. Density in SAI was 116 people pkm^2 in 1951. By 1964 it had more than quadrupled to 534 pkm^2. Thirty years later, it was over 2000 pkm^2. In less than a decade, it had increased another 50% [4], making San Andres the most densely populated oceanic island in the hemisphere and one of the most crowded in the world.

Tensions are increasing between native islanders and continental residents as well as between established Latin residents and the growing number of impoverished individuals and families fleeing to the islands from the political and financial insecurities of the mainland. In SAI, native islanders feel a high level of resentment because of the perceived take-over of their traditional sea area and the depletion of marine and coastal resources by resident immigrants, continental exporters, and the tourist industry.

3.4. Conflicts with authorities

Stakeholders characterized the situation with marine authorities in several problem areas: militarization, the failure of enforcement, and restrictions on artisanal fishers. The problems of drug smuggling through the region combined with national strategies to assert sovereignty over the marine territory have increased the military presence in archipelago waters. Although major abuses of power do not occur, the resulting oppressive atmosphere is considered detrimental to the development of international ecological and diving tourism, and intimidates and alienates artisanal fishers and traditional users [2]. Language and cultural differences exacerbate these conflicts.

In regard to enforcement, there were problems on both sides. Conflicts between resource users and local authorities have emerged from the failure of users to respect regulations that prohibit the extraction of coral sand, spear fishing (except by traditional users in designated areas), size limits for key commercial species, bans on the capture of endangered and threatened species, and the use of illegal fishing gears. On the other hand, the main complaint of stakeholder groups was the failure of local and national authorities to consistently and impartially enforce regulations and exercise adequate control.

For artisanal fishers, a source of particular conflict has been the number of permits, licenses, or registration documents required to fish. The contention of the fishers has been that these documents have not helped to manage fisheries, but rather were designed to manage the fishers themselves. Historically free to fish throughout the archipelago's waters at will, local fishers are now required to have a variety of documents including vessel registration, captain's license, seaman's license, "anti-smuggling" certificate, and clearance (zarpe) for each fishing trip. These documents are issued locally by the Port Captain (office of DIMAR) except for the drug certificate, which is issued by a special office in Bogotá.

Each of these documents has caused controversy among fishers, adding to the tension in their relationship with national authorities. Fishers have always found procedures complicated as well as inconvenient. A general complaint has been that papers must be submitted in Spanish when many fishers do not know this language. Another objection has been that many of the documents have to be reissued with new documentation and payment annually and cannot simply be renewed for a minimal fee. Also resented was the fact that a new clearance was required for every fishing trip and that clearances would not

be issued for trips carrying enough fuel to reach traditional fishing grounds in the northern region (Serrana, Serranilla, New Shoal). Fishers also pointed out that the increasingly complicated and expensive procedures, by making it harder to reach remote fishing grounds, contributed to over-exploitation of easily accessible areas.

4. Economic considerations

Tourism, water sports, and artisanal fishing are mainstays of the local economy that directly rely on coastal and marine resources. Information was gathered from primary and secondary sources including user groups, individuals, and businesses; the Chamber of Commerce; CORALINA inventories; the Port Captains' Offices; INPA; and the departmental government offices of tourism, fisheries, and planning. Totaling the number of individuals in these data, the number of people whose livelihood depends directly on marine resources is over 25% of the total population in OPSC and approximately 15% of the population in the entire archipelago. However, not only does the scarcity and inaccuracy of existing information make it difficult to quantify the proportion of the population that depends on marine resources, but also these data have major limitations [5].

In the first place, persons who depend on these resources but are not organized are not included. For example, the number of independent artisanal fishers is much larger than the number affiliated to cooperatives. Secondly, since the collapse of the commercial tourism model in the last decade, the tourism industry in San Andres is of the "sun, sand, and sea" variety with a small number of eco-tourists visiting OPSC. Both of these types of tourism depend on healthy marine and coastal ecosystems. A number of independent tourism-related enterprises are not registered and most commercial enterprises, including the many shops and importers in SAI, depend on tourist business. Typical of developing nations and societies with limited access to capital, there is a large informal economy of street vendors, independent workers, and hustlers who rely on tourist trade and/or gathering natural resources.

Finally, available statistics do not reflect subsistence users or dependants of recorded individuals. In virtually every island household, one or more persons earn a living from fishing or tourism. Since over 50% of adults are not formally employed, income sharing within extended families is the norm. In addition, a third of the population is either over 70 or under 15 years of age, so cannot be considered of working age. Therefore, a more accurate estimate would be that the majority of residents depend on marine resources for part of their livelihood. Furthermore—as resource user groups emphasized during consultations—on small isolated islands like SAI and OPSC, where the total land area is coastal zone (as differentiated from those of coastal islands or mainland "linear" coastal communities that are backed up by a wealth of terrestrial resources), the economic welfare of the entire community is determined by the availability and condition of marine and coastal resources and the productivity of marine ecosystems.

5. Seaflower MPA

The proposal to establish a locally managed MPA emerged during the search for solutions to the identified issues, threats, and conflicts. Stakeholders and CORALINA agreed that establishing a multiple-use MPA in productive, vulnerable areas would be a viable tool to reduce human-based impacts on ecosystems and biodiversity. Zoning could

support diverse aims like protecting ecologically critical sites and entire ecosystems, controlling access, reducing conflicts between user groups, maintaining and recovering fisheries, promoting tourism and education, and improving research and monitoring. Early in the planning process, the following MPA objectives were developed in collaboration with stakeholders:

- preservation, recovery, and long-term maintenance of species, biodiversity, ecosystems, and other natural values including special habitats;
- promotion of sound management practices to ensure long-term sustainable use of coastal and marine resources;
- equitable distribution of economic and social benefits to enhance local development;
- protection of the rights pertaining to historical use; and
- education to promote stewardship and community involvement in planning and management.

To realize these objectives, five zone types were defined: (1) no-entry, with use restricted to research and monitoring; (2) no-take, allowing a variety of non-extractive uses; (3) artisanal fishing, for use by traditional fishers only; (4) special use, for specific uses like shipping lanes, anchorage, ports, and marinas or uses with the potential to generate conflict like heavily used watersports areas; and (5) general use, where minimal restrictions apply to preserve MPA integrity. Stakeholder groups previously in conflict over resource use began to work together in defining boundaries, zoning and management options for the MPA.

Information about distribution of resources, use patterns, and values was gathered from stakeholders through surveys, interviews, and social mapping exercises. Working groups also produced maps with their preferred allocation of zones based on their knowledge, needs, and use. CORALINA gathered information on the value that stakeholders placed on various kinds of zones, another factor in evaluating alternatives. The research tool, AGORA, was used to assist this process by examining stakeholders' conflicting priorities for a number of criteria deemed relevant to the evaluation of alternative geographical zoning configurations [6]. Information about risk and vulnerability was collected from scientists, managers, and users. All of this information was entered into CORALINA's Geographical Information System (GIS).

Meanwhile, zoning criteria—representativeness, connectivity, key habitats, ease of demarcation, likelihood to foster compliance, and potential to effectively meet MPA objectives—were agreed upon. Based on these criteria and the general objectives, specific objectives for zoning were also designed, which are:

- *Species protection*: provide protection to biodiversity and species of special concern.
- *Habitat protection*: protect representative habitats and those that are critical to the survival of species of special concern and to the maintenance of ecosystem functioning, taking into account habitat connectivity.
- *Recovery*: allow for regeneration of degraded benthic communities and/or overexploited populations of fish and other marine species.
- *Socioeconomic impacts*: minimize adverse socioeconomic impacts.
- *Sustainable use*: ensure sustainability of consumptive and non-consumptive uses of the resources.

- *Conflict resolution*: eliminate or minimize incompatible uses and conflicts between users.
- *Equity and tenure*: guarantee equitable distribution of economic and social benefits, and protect historical/traditional rights.
- *Implementation*: consider ease of demarcation for management, compliance, and enforcement.

Since working together in resource management planning was a new experience for all stakeholders, CORALINA began a process of capacity building through public and private environmental education initiatives targeting all ages, levels, and groups of the community. In addition to the island-wide outreach program, achievements included developing and implementing an accredited technical degree program in coastal and marine resource management at a local university, introducing island-specific curricula for local schools, and stakeholder training in topics like water quality, MPA management, and coastal and marine ecosystems. Hoteliers participated in the "Environmental Stars" incentive program to conserve resources, reduce pollution, and halt the discharge of waste into coastal waters.

CORALINA became involved in extensive discussions with stakeholders in their own languages, particularly in regard to basic resource rights, and facilitated exchanges with other authorities and institutions. Cross-cultural meetings were held to discuss shared interests and problems. Advanced training activities included visits by fishers, dive instructors, students, and MPA managers to other MPAs in the wider Caribbean region and the introduction and implementation of community-based monitoring programs. Stakeholders expressed a desire to be involved in surveillance of coastal waters so a volunteer inspectors' program was developed to cater to this desire, which included training in regulations, zoning, and methods of "soft" enforcement.

6. Conclusions

One of the most important strategies in the conservation of terrestrial ecosystems in Colombia and elsewhere has been the establishment of protected areas. In cases where local people have been involved in planning, and traditional use has been realistically addressed within that planning, protected areas have been more successful. However, the beneficiaries of conservation measures and protected areas are too often outsiders, with local people not involved at any level. It is therefore not surprising when local people resent protected areas [7]. Hence, it is important for local resource users to have control over their own resources if they are expected to conserve them and for the planning process to include tools and strategies that will involve local user groups at the decision-making level.

Until recently, centralized management authorities devised any conservation measures that were carried out in the San Andres Archipelago. Local communities were ignored or overruled. As in most places, conservation initiatives failed under these conditions [8]. CORALINA faced many challenges while involving stakeholders in planning and management, and carrying out a participatory process to plan and implement alternatives to improve coastal and marine resource management resulted in many lessons learned. Some of these are presented below:

- Extensive programs were required to introduce and explain new concepts like participatory planning, shared responsibility for management, and stewardship as well

as to communicate basic information on ecosystems, resources, biodiversity, and conservation.

- The right conditions needed to be identified and then provided to stimulate an open exchange of information and discussion of problems, which not only informed management but also contributed to empowering stakeholders and granting them ownership of the process.
- Considerable effort had to be directed towards building trust between participants—public and private organizations, national, and international partners, fishers, water-sports operators, and community members of all ethnic groups, among others—and then towards maintaining and facilitating stakeholder commitment throughout the process. Participation is time consuming; so setting and meeting joint goals increased momentum while achieving combined successes encouraged continued involvement.
- A social process, such as this, calls for a long-term commitment on the part of the lead agency that includes clear policies, trained personnel, and staff continuity. Many personnel—both managers and staff—lack the political will or power to promote participatory planning and collaborative management and/or the skills necessary to achieve it.
- Stakeholders need to be trained to play an active role in management. Modern times demand less dominant institutions; the trend is to transform institutions into collaborative management agencies; requiring that management, staff, and the community all learn to work in new ways.
- National government institutions have been reluctant to recognize the knowledge and ownership claims of the native communities; nor have they been sensitive to the sociocultural needs of the local people. They have tended to ignore local institutions and are not prepared to share decision-making with native islanders, notably about fisheries, and non-renewable resources found in the archipelago's waters. Representatives of national agencies posted in the archipelago, as outsiders affiliated with centralized government agencies, rarely stay long enough to understand the local situation or to change their preconceptions.
- The participatory process provided an opportunity to demonstrate to authorities that the approaches generally used to manage the country's natural assets—like top-down planning, discrimination against traditional users in planning and decision-making, and exclusion from benefits—and the existing inequitable economic system have contributed to loss of biodiversity and over-exploitation of the oceans, destroyed ecosystems and habitats, and worsened social conflicts.
- Leadership among community members is needed to keep moving in the right direction and to ensure that agreements on zoning and shared management responsibilities are met. Native islanders tend to walk away or remain silent when confronted with people who represent the privileged and powerful and who defend their economic interests. Fishers are well placed to develop and exercise such leadership in the realm of marine resources.

For conservation measures and management to be successful, it is essential to listen to the voices of the community; during consultations a number of risks to the process were identified by the stakeholders themselves. These included lack of commitment from authorities, inability to achieve financial self-sustainability, loss of community interest, and failure to reduce human threats to the marine ecosystems.

A lack of commitment from other government agencies that share jurisdiction over marine and coastal management with CORALINA would result in a failure of implementation and enforcement. Primary institutions whose active support is needed to ensure effective implementation of the MPA—particularly in terms of enforcement and compliance with new regulations and policies that control industrial fishing and define use zones—are the Departmental Fishing Board, Secretary of Fisheries, DIMAR (navy, coast guard, and port captains), INCODER (the new national fisheries agency that has replaced INPA), and the Port Authority.

A lack of national government support for local management would put the locally managed MPA at risk. Given that until 1991 Colombia operated under a centralized political system, national government institutions are prone to concentrate power. It is important that these institutions respect and promote local management, understanding that decentralized environmental management and local community empowerment result in better resource management decisions and improved local resource access. This in turn causes a self-reinforcing cycle of ecological and social sustainability. The Colombian political system is becoming decentralized in accord with national policy and legislation reforms demanded by the 1991 Constitution. This national policy framework is soundly based in constitutional law, although the required regulatory systems are not yet fully functional.

Inadequate long-term funding could also weaken MPA implementation. MPAs in developing nations frequently fail to achieve objectives; one of the main reasons for this failure is insufficient financial resources to develop and implement management plans. The Seaflower MPA must seek methods to generate funds to pay the continuing costs of management including monitoring and enforcement. Since dive tourism and eco-tourism are among the fastest growing types of tourism, while tourism itself is becoming the world's largest industry, many financial mechanisms used to generate funds within the MPA should depend on tourism.

Without the long-term support of the local community, the MPA will not be effective. Since this alternative grew out of local demands for improved marine resource management, the level of community commitment is high. However, this level of support leads to high expectations that can be difficult to satisfy [2]. Decision-making has to acknowledge traditional sea tenure and the need for consensus and resolution of conflicts, seeking ways to improve equity and increase local autonomy and collaborative management.

If anthropogenic threats to the MPA are not reduced, the ecosystems could be irreparably damaged. Implementation of multiple-use zones in agreement with stakeholders provides a legal and spatial basis for controlling the severe threats to marine ecosystems that resulted from the open-access regime, particularly in near shore SAI and OPSC waters, and from the over-fishing in the northern cays. Management policies and regulations within zones are designed to promote conservation and sustainable use and reduce threats from dumping, over-exploitation, use of illegal fishing gears, poorly managed recreational uses, anchoring and other forms of physical contact. Involving stakeholders in decision-making and management of their own use zones creates stewardship and fosters compliance. Community education will continue to play an important role.

In conclusion, proper management of marine and coastal resources is vital for the survival of the San Andres Archipelago's native islanders and their culture. They have

much to lose if biodiversity and ecological processes are damaged or if fisheries management continues to be inequitable and inefficient. Native islanders live with the hope that their rights to use the sea—as the original settlers of the San Andres Archipelago—will be fully recognized in the future by the Colombian government and its authorities. The issue for islanders is not only what is at stake in regard to their traditional livelihoods if coastal and marine resources are not conserved but, more importantly in their eyes, whether they have the right to manage and use the natural resources that have supported them for centuries and how they can defend and assure their rights. This concern is made explicit in the Seaflower MPA's general objectives and zoning objectives that guarantee equitable distribution of economic and social benefits to enhance local development and protection of the rights pertaining to historical use. So far the participatory process to plan and manage the Seaflower MPA has succeeded in joining national and local government together with the archipelago community, private sector, and international partners to begin a journey that, if it continues on course, will advance sustainable development, improve environmental justice, and acknowledge rights of tenure to coastal and marine resources.

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